

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A structural sandwich plate member comprising:
first and second outer plates;
a core of plastics or polymer material bonded to said outer plates with sufficient strength to transfer shear forces therebetween; and
a plurality of lightweight forms within the core, wherein said forms do not tessellate in a plane parallel to said outer metal layers and have principal dimensions in the range of from 20 to 200% of the distance between said outer metal layers.
2. (Original) A structural sandwich plate member according to claim 1 wherein said lightweight forms are arranged in a single layer.
3. (Original) A structural sandwich plate member according to claim 1 wherein said lightweight forms are arranged in multiple layers.
4. (Original) A structural sandwich plate member according to claim 3 further comprising an interlayer between two of said multiple layers of forms.
5. (Currently Amended) A structural sandwich plate member according to claim 3 or 4 wherein the forms of one layer directly overly the forms of the layer below so that there are parts of the core material extending directly between the outer plates.

6. (Currently Amended) A structural sandwich plate member according to ~~any one of the preceding claims~~ claim 1 wherein said lightweight forms are hollow.

7. (Currently Amended) A structural sandwich plate member according to ~~any one of the preceding claims~~ claim 1 wherein said forms are spherical.

8. (Original) A structural sandwich plate member according to claim 7 wherein said forms have a diameter substantially equal to $1/N$ of the distance between said outer plates, N being an integer in the range of from 1 to 5.

9. (Currently Amended) A structural sandwich plate member according ~~any one of the preceding claims~~ to claim 1 wherein said forms have a diameter greater than or equal to 20mm.

10. (Currently Amended) A structural sandwich plate member according ~~any one of the preceding claims~~ to claim 1 wherein said forms have a diameter less than or equal to 100mm.

11. (Currently Amended) A structural sandwich plate member according to ~~claim 6, 7, 8, 9 or 10~~ wherein said forms are made of polypropylene and have a solid skin.

12. (Currently Amended) A structural sandwich plate member according to ~~any one of claims~~claim 1 to 10 wherein said forms are made of metal, ceramic, or a high tensile strength fabric, such as Kevlar(TM) or Spectra(TM).

13. (Currently Amended) A structural sandwich plate member according to ~~any one of the preceding claims~~claim 1 wherein said forms have a plurality of protrusions so as to increase the spacing between them, and hence the proportion of the core cavity occupied by core material.

14. (Currently Amended) A structural sandwich plate member according to ~~any one of the preceding claims~~claim 1 wherein said forms are filled with an inert gas, a fire retardant substance, a thermal or acoustic insulating fluid or a partial vacuum.

15. (Currently Amended) A structural sandwich plate member according to ~~any one of the preceding claims~~claim 1 further comprising a mesh, e.g. of wire, to assist the placing of the forms and space them apart from each other and/or from the outer plates.

16. (Currently Amended) A structural sandwich plate member according to ~~any one of the preceding claims~~claim 1 wherein said core has a thickness greater than or equal to 20mm.

17. (Currently Amended) A structural sandwich plate member according to ~~any one of the preceding claims~~claim 1 wherein said outer plates are made of metal.

18. (Currently Amended) A structural sandwich plate member according to ~~any one of the preceding claims~~claim 1 wherein said outer plates have a thickness greater than or equal to 0.5mm.

19. (Original) A method of manufacturing a structural sandwich plate member comprising the steps of :

providing first and second outer plates in a spaced-apart relationship and a plurality of lightweight forms within the space between said plates, wherein said forms do not tessellate in a plane parallel to said outer metal layers and have principal dimensions in the range of from 20 to 200% of the distance between said plates;

injecting uncured plastics or polymer material to fill the space defined between said outer plates and around said plurality of forms; and

allowing said plastics or polymer material to cure to bond said outer plates together with sufficient strength to transfer shear forces therebetween.